| **Subject:** | **MATHEMATICS** |
| | **Level 2 Certificate in Further Mathematics** |
| | **(Set 1 only)** |

| **Exam board** | |
| **and overall exam code:** | **AQA 8360** |

| **Exam contents:** | **2 written papers covering the whole specification** |

| Paper No | Length | Calculator/ Non calculator | Exam date | Marks | Percentage of overall GCSE |
|---|---|---|---|---|---|
| 8360 Paper 1 | 1hr 30 mins | Non-Calculator | 19 JUNE | 70 | 40% |
| 8360 Paper 2 | 2hr | Calculator | 21 JUNE | 105 | 60% |

The following topics will be tested in the examination:

## Number
Manipulation of surds

## Algebra
Definition of a function
Domain and range of a function
Expanding brackets and collecting like terms
Factorising
Manipulation of algebraic fractions
Manipulation of formulae and expressions
Use of the factor theorem
Completing the square
Sketch graphs of linear and quadratic functions
Solution of linear and quadratic equations
Algebraic and graphical solutions of simultaneous equations and inequalities
Index laws, including fractional and negative indices
Algebraic proofs

## Sequences
Nth term of linear and quadratic sequences
Limiting value of a sequence as n tends to infinity

## Coordinate Geometry
### Straight line
Midpoint, distance between two points
Gradient of parallel and perpendicular lines
Find the equation of a straight line and draw
### Circles
Equation of a circle with centre at the origin and not at the origin

## Calculus

Find the gradient function
Differentiation of polynomials
Find the equation of a tangent and normal at any point on a curve
Use differentiation to find stationary points on a curve.
Sketch a curve with known stationary points

## Matrix Transformations

Multiplication of matrices
Identity and inverse matrices
Transformations of the unit square in the x-y plane
Combinations of transformation

## Geometry

Angle properties of parallel and intersecting lines, triangles, all special types of quadrilaterals and polygons.
Understand and use Circle theorems
Understand and construct geometrical proofs using formal arguments
Area, Sine and Cosine Rules in scalene triangles
Use of Pythagoras' theorem in 2D or 3D
Sketch and use trig graphs
Knowledge and use of special triangles
Use of trigonometric identities
Solution of simple trigonometric equations in given intervals